

ABSTRACT

A method of induction heat treating the outer surface of articles having an irregular surface shape. The method employs an induction coil that provides a non-planar magnetic field that is adapted to the irregular shape of the article, such that distinct sections of the induction coil produce distinct magnetic fields that are adapted to induce currents in, and thereby provide heat to, distinct sections of the outer surface of the article. The method and induction coil are particularly adapted to provide an induction hardening heat treatment for the outer surfaces of the inner races of Rzeppa-type constant velocity joints.